REMARKS

Favorable consideration and allowance of claims 1-4 are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1-6 were rejected under 35 U.S.C. § 102(b) as being anticipated by Ujiie (US 6,748,346). Applicant respectfully traverses the rejection as set forth below.

Claim 1 is amended to recite a shape changing element whose shape becomes different shapes between before and after assembling and other common elements whose shapes do not become different shapes between before and after assembling. Support for these amendments is present, for example, in Applicant's specification at p. 10, line 9 – p. 11, line 3. Claim 3 is amended in a manner analogous to claim 1. Claims 5 and 6 are canceled herein.

Applicant submits that Ujiie fails to teach or suggest all of the limitations of the method of creating two-dimensional drawings based on a three-dimensional model claimed in claim 1. In particular, Ujiie does not disclose the features of "holding, in three-dimensional shape information of a parts model having a shape changing element whose shape becomes different shapes between before and after assembling and other common elements whose shapes do not become different shapes between before and after assembling, three-dimensional information on the shape before assembling and the shape after assembling of the shape changing element and the shape of the common elements," and

"developing the held three-dimensional information into the two-dimensional drawing in accordance with each of the restriction conditions, based on the operation program of the memory source."

In a two-dimensional drawings creation method of creating two-dimensional drawings based on a three-dimensional model by using a computer source, the characteristics provide a step of holding, in three-dimensional shape information of a parts model having a shape changing element whose shape becomes different shape between before and after assembling and other common elements whose shapes does not becomes different shape between before and after assembling, three-dimensional information on the shape before assembling and the shape after assembling of the shape changing element and the shape before assembling of the shape changing element and the shape of the common element to become a single part to each other, a step of setting a restriction condition between the shape after assembling of the shape changing element and the shape of the common elements to become a single part to each other, and a step of developing the held three-dimensional information into the two-dimensional drawing in accordance with each of the restriction conditions, based on the operation program of the memory source.

Thus, in amended claim 1 the parts model and the two-dimensional drawing are matched by setting restriction conditions, i.e., the first condition between the shape before assembling of the shape changing element and the

shape of the common element to become a single part to each other and the second condition between the shape after assembling of the shape changing element and the shape of the common elements to become a single part to each other. The shape of parts with "the shape changing element" between before and after is different for each status. Thus, amended claim 1 can set by restriction the parts model between the shape before and after assembling of the shape changing elements, and therefore the parts model and the two-dimensional drawing can match correctly without conflict of above two parts model as described in paragraph [0006] of Applicant's specification.

Further, the restriction condition can create the two-dimensional drawing for the before assembling status by setting to the shape before assembling of the shape changing element and the shape of the common element, also, can create the two-dimensional drawing for the after assembling status by setting to the shape after assembling of the shape changing element and the shape of the common element. Therefore, a two-dimensional drawing can be created efficiently, since the common element can use commonly only select the restriction condition for each status without providing the shape before and after assembling individually.

Ujiie discloses an interference verifying device and method for checking whether or not an assembly can be made by performing interference verification and checking a part shape change in relation to the assembly route which the

route on the parts to be assembled move from current positions to target position in the product assembly process.

The assembly simulator 25 in Ujiie determines whether or not the selected part reaches the final position while moving the selected part along the specified route (step 3, 4). When the selected position does not reach yet to the final position (the finish position of assembly), the interference verification unit 29 determines whether or not interference (contact) with the counter part occurs while moving (step S5).

If the interference with the counter (different) part is detected, an element of part of an interference partner has been replaced with the shape after being changed (Step S6). If the interference partner is not changed, the library 28 is searched by using the library accessing unit 27, and determines whether or not the element is registered as an element permitting transformation (Step S7).

In step S4, the interference verification unit 20 inquiries of the user whether or not the original shape saved to the save area is reproduced when the selected part reaches the final position (Step S12).

When the user instructs reproduction, the changed shape is replaced with the original shape, and the display controlling unit 30 displays the original shape (Step S13). Thereafter, the interference verification unit 29 makes interference checking in the final assembly state by using the original shape (Step S14). If interference is not detected in the final assembly state, the result of the

determination indicating that assembly along the specified assembly route is feasible.

In other words, Ujiie discloses checking a part shape change during to the assembly route (start to the final assembly state). If the interference with the counter (different) part is detected before final assembly state, the interference verification unit 29 judges as registered an element permitting transformation. Finally, in the final assembly state, the interference verification unit 29 judges the interference state by using the original shape, if interference is not detected in the final assembly state, the result of the determination indicates that assembly along the specified assembly route is feasible. If all of above condition for 1 to 3 are satisfied, the assembly is judged as to feasible.

In the two-dimensional drawings creation method of creating two-dimensional drawings based on a three-dimensional model by using a computer source by Applicant's amended claim 1, the parts model is matched to the two-dimensional drawing with efficient process. The parts applying to claim 1 should satisfy the shapes that are changed between before and after assembling (that is, the shape of parts between before and after assembling are different in each state such as the part applied with caulking work or the like). According to above the precondition, amended claim 1 can set by restriction the parts model between the shape before and after assembling of "the shape changing elements," therefore the parts model and the two-dimensional drawing can match correctly

without conflict of the above two parts model [0006] Applicant's specification and the two-dimensional drawing with efficient process (Figs. 2 and 3).

To the contrary, Ujiie discloses the interference verifying device and method for checking whether or not the assembly can be made by performing interference verification checking a part shape change in relation to the assembly route which the route on the parts to be assembled move from current positions to target position in the product assembly process. Further, in checking a part shape change during to the assembly route (from start to the final assembly state), if the interference with the different part is detected before final assembly state, the interference verification can judge an element permitting transformation, in the final assembly state by using the original shape, if interference is not detected in the final assembly state, the result of the determination indicating that assembly along the specified assembly route is feasible. In other words, Ujiie only refers to whether or not the shape registered an element permitting transformation or the original shape in the course of assembly. If the shape satisfies the feasible condition for assembly, the shape by judging the interference verification is equivalent between before and after state.

Accordingly, Ujiie does not disclose the two-dimensional drawings creation method of creating two-dimensional drawings based on a three-dimensional model by using a computer as claimed in amended claim 1. Therefore, claim 1 is patentable over Ujiie.

Claim 2 is patentable due to its dependence from claim 1.

Claim 3 is patentable for reasons analogous to those for claim 1. Claim 4 is patentable due to its dependence from claim 3.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #038921.58289US).

Respectfully submitted,

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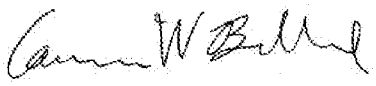

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